

Table of Contents

Chapter 1: Purpose of and Need for Action	1-1
1.1. Document Structure	1-1
1.2. Background	1-1
Scope of the Project	1-2
1.3 Scope of Project	1-4
1.4. Purpose of and Need for Action	1-3
Desired Future Condition	1-4
1.4 Proposed Action (Alternative 2)	1-4
1.6 Management Direction	1-5
Mt. Hood National Forest Roads Policies	1-6
Forest Service national Travel Management Regulations	1-7
State of Oregon Regulations	1-8
Mt. Hood National Forest – Forest Orders	1-8
Land Use Allocations	1-11
1.7. Management Standards and Guidelines	1-13
1.8. Decision Framework	1-15
1.9. Public Involvement	1-16
1.10. Issues	1-17
1.10.1. Key Issues	1-18
Key Issue 1: Motorized Recreation	1-18
Key Issue 2: Non-motorized Recreation	1-19
Key Issue 3: Wildlife Disturbance	1-19
1.10.2 Resolved Issues	1-20
Safety	1-20
Compliance	1-20
Hazardous Materials	1-20
Heritage Resources	1-21
1.10.3 Tracking Issues	1-21
Local Economies	1-21
Cost of OHV System	1-22
Air Quality	1-22
Aquatic Resources	1-22
Soils	1-22
Invasive Species	1-22
Native Species	1-23
Chapter 2: Alternatives, Including the Proposed Action	2-1
2.1. Alternative Development Process	2-1
2.2. Assumptions and Analysis Framework	2-2

2.3. Alternatives Considered in Detail	2-4
2.3.1. Alternative 1 – No Action Alternative	2-4
General Description and Location of Current OHV Use	2-4
Current OHV Use	2-5
Land Use Allocations	2-8
2.3.2. Alternative 2 – Proposed Action	2-12
General Description and Location of Each Proposed OHV System	2-13
Proposed OHV Systems	2-15
Land Use Allocations	2-18
General Forest Area	2-20
Forest Plan Amendment	2-21
2.3.3. Alternative 3	2-26
General Description and Location of Each Proposed OHV System	2-26
Proposed OHV Systems	2-27
Land Use Allocations	2-30
Forest Plan Amendment	2-32
2.3.4. Alternative 4	2-35
General Description and Location of Each Proposed OHV System	2-35
Proposed OHV Systems	2-36
Land Use Allocations	2-37
Forest Plan Amendment	2-39
2.4. Project Design Criteria	2-39
OHV Routes (Seasonal Restrictions, Rerouting)	2-39
Recreation Management	2-40
Roads	2-40
Law Enforcement	2-41
Public Awareness and Education	2-42
Wildlife Management	2-42
Invasive Plants	2-43
Soil and Erosion Control	2-43
Water Resources	2-44
Heritage Resources	2-45
Wildland Fire	2-46
Range	2-46
Road Decommissioning	2-46
Culvert Replacement	2-48
2.5. Monitoring Framework	2-49
2.6. Comparison of Alternatives	2-50
2.7. Alternatives Considered, but Eliminated from Detailed Study	2-61
2.7.1. Prohibit Off-highway Vehicle Use on Forest	2-61
2.7.2. Designate All Existing “On-the-Ground” Routes	2-61
2.7.3. Continued Off-Highway Vehicle Use in Specific Areas	2-62
2.7.4. Off-Highway Vehicle Use on Gravel and Native Surface Roads	2-64

CHAPTER 3: Affected Environment and Environmental Consequences	3-1
3.1. Recreation	3-1
3.1.1. Affected Environment	3-1
Recreation Planning Framework	3-1
Description of Recreation Resources	3-3
3.1.2. Effects Analysis	3-10
Recreation Opportunity Spectrum and Recreation Niche Settings	3-10
Forest Plan Amendment	3-12
Quality of OHV Experience	3-12
OHV System Layout	3-17
Loop Opportunities	3-21
Diversity in Trail Difficulty	3-24
Supply and Demand	3-29
Access to Rock Creek OHV Routes	3-36
Noise from OHVs	3-39
3.2.3. Incomplete and Unavailable Information	3-47
3.2. Soils	3-48
3.2.1. Affected Environment	3-48
LaDee Flats Proposed OHV System (Soil Types 107, 312, 313, 320)	3-48
Peavine Proposed OHV System (Soil Types 304, 305)	3-49
Graham Pass Proposed OHV System (Soil Types 309)	3-49
Bear Creek Proposed OHV System (Soil Types 333)	3-49
Mt. Defiance Proposed OHV System (Soil Types 333, 6)	3-49
Gibson Prairie Proposed OHV System (Soil Types 347)	3-50
McCubbins Gulch Proposed OHV System (Soil Types 352)	3-50
Rock Creek Proposed OHV System (Soil Types 152, 156, 352, 353)	3-50
General Forest (Numerous Soils Types)	3-50
3.2.2. Effects Analysis	3-51
Indirect and Direct Effects	3-51
Alternative 1 – No Action Alternative	3-51
Alternative 2 – Proposed Action	3-53
Alternative 3	3-54
Alternative 4	3-56
3.2.3. Incomplete and Unavailable Information	3-59
3.3. Water Quality	3-59
3.3.1. Affected Environment	3-60
Sedimentation	3-60
Dust, Bacteriological, and Chemical Contaminants	3-60
Analysis Area Description	3-61
Drinking Water	3-63
Clean Water Act	3-64
Key Watersheds	3-66
Groundwater	3-67
Riparian Conditions and Riparian Reserves	3-67
Summary of Affected Environment	3-68

3.3.2. Effects Analysis	3-68
Alternative 1 – No Action Alternative	3-68
Alternative 2 – Proposed Action	3-80
Alternative 3	3-93
Alternative 4	3-101
3.3.3. Incomplete and Unavailable Information	3-113
3.4. Fisheries	3-114
3.4.1. Existing Conditions	3-114
Aquatic Organisms	3-114
US Forest Service, Region 6 Regional Forester’s Special Status Sensitive Species	3-125
Other Important Aquatic Species	3-128
Critical Habitat	3-128
Aquatic Habitat Conditions	3-136
3.4.2. Effects Analysis	3-140
Alternative 1 – No Action Alternative	3-140
Alternative 2 – Proposed Action	3-151
Alternative 3	3-168
Alternative 4	3-172
3.4.3. Incomplete and Unavailable Information	3-177
3.5. Wildlife	3-178
3.5.1. Affected Environment	3-178
3.5.2. Effects Analysis	3-179
Northern Spotted Owl (Threatened)	3-179
Special Status Species	3-184
White-headed and Lewis’s Woodpecker	3-185
Johnson’s Hirstreak Butterfly	3-185
Terrestrial Mollusks	3-186
Larch Mountain Salamander	3-186
Oregon Slender Salamander	3-186
Fringed Bat and Townsend’s Big-eared Bat	3-186
Effects on Other Rare or Uncommon Species	3-187
Northwest Forest Plan Wildlife Requirements	3-187
Effects to Species and Focal Groups	3-188
Snags and Down Wood	3-208
DecAid Analysis	3-208
Management Indicator Species	3-209
Deer and Elk Habitat	3-210
American Marten & Pileated Woodpecker	3-213
Avian Resources (Migratory birds and Land birds)	3-215
3.5.3. Incomplete and Unavailable Information	3-225
3.6. Botany	3-225
3.6.1. Affected Environment	3-225
3.6.2. Effects Analysis	3-228
General Forest	3-228
LaDee Flats Proposed OHV System	3-228

McCubbins Gulch Proposed OHV System	3-229
Rock Creek Proposed OHV System	3-230
Peavine Proposed OHV System	3-231
Gibson Prairie Proposed OHV System	3-231
Bear Creek Proposed OHV System	3-232
Graham Pass Proposed OHV System	3-232
Mt. Defiance Proposed OHV System	3-233
3.6.3. Incomplete and Unavailable Information	3-233
3.7.1. Aquatic Conservation Strategy	3-233
3.8. Heritage	3-237
3.8.1. Affected Environment	3-237
LaDee Flats Proposed OHV System	3-237
Peavine Proposed OHV System	3-239
Graham Pass Proposed OHV System	3-240
McCubbins Gulch Proposed OHV System	3-241
Rock Creek Proposed OHV System	3-242
Gibson Prairie Proposed OHV System	3-242
Bear Creek Proposed OHV System	3-243
Mt. Defiance Proposed OHV System	3-244
3.8.2. Effects Analysis	3-244
Alternative 1 – No Action Alternative	3-244
Alternative 2 – Proposed Action	3-245
Alternative 3	3-249
Alternative 4	3-250
3.8.3. Incomplete and Unavailable Information	3-251
3.9. Law Enforcement	3-252
3.9.1. Existing Conditions	3-252
3.9.2. Effects Analysis	3-253
Direct, Indirect and Cumulative Effects for Alternative 1 – No Action Alternative	3-253
Direct, Indirect and Cumulative Effects for <i>All</i> Action Alternatives	3-255
3.10. Fire Suppression	3-257
3.9.1. Affected Environment	3-257
Fire History on Mt. Hood National Forest – 1980 through 2007	3-259
Clackamas FMU (Peavine, LaDee Flats, and Graham Pass OHV Systems)	3-261
Eastside FMU (McCubbins, Rock Creek, Gibson Prairie OHV Systems)	3-262
Hood River FMU (Bear Creek, Mt. Defiance OHV Systems)	3-264
Summary of Existing Conditions for the Proposed OHV Systems	3-265
3.9.2. Effects Analysis	3-266
Alternative 1 – No Action Alternative	3-266
Action Alternatives	3-267
Summary of Effects for Action Alternatives	3-270
3.9.3. Incomplete and Unavailable Information	3-271
3.11. Transportation and Safety	3-271
3.11.1. Affected Environment	3-271
Road Maintenance	3-272

Road Management.....	3-274
Mixed-Use Analysis.....	3-275
3.11.2. Effects Analysis.....	3-276
Alternative 1 – No Action Alternative.....	3-276
Alternative 2 – Proposed Action.....	3-276
Alternative 3.....	3-277
Alternative 4.....	3-278
Summary.....	3-279
3.11.3. Incomplete and Unavailable Information.....	3-280
3.12. Air Quality.....	3-281
3.12.1. Affected Environment.....	3-281
3.12.2. Effects Analysis.....	3-283
Alternative 1 – No Action Alternative.....	3-283
Alternatives 2, 3 and 4.....	3-284
3.12.3. Incomplete and Unavailable Information.....	3-285
3.13. Congressionally Designated Areas.....	3-286
3.13.1. Existing Conditions.....	3-286
Congressional Designated Areas.....	3-286
Inventoried Roadless Areas.....	3-287
3.13.2. Effects Analysis.....	3-287
Congressional Designated Areas and Inventoried Roadless Areas.....	3-287
3.14. Socio-Economic, Civil Rights, and Environmental Justice.....	3-289
3.14.1. Affected Environment.....	3-289
Population Trends.....	3-290
Age Distribution, Gender, Racial Composition and Poverty Levels.....	3-290
Demographics of OHV Use by Race, Ethnicity, and Income in the Pacific Region.....	3-291
3.14.2. Effects Analysis.....	3-294
Estimated Economic Effects of Current OHV Use.....	3-294
OHV Trip-Related Expenditures in Oregon.....	3-296
Annual OHV-related Expenditures in Oregon.....	3-297
Estimated Non-Motorized Recreation Effects.....	3-298
Economic Impacts of Changes in Supply and Demand.....	3-298
Budget Trends for Road and Trail Maintenance.....	3-299
Balancing Motorized and Non-motorized Uses.....	3-300
Effects of Noise from OHVs.....	3-303
Effects of OHV Use Adjacent to Irrigation Ditch.....	3-306
Effects of OHV Use on the Availability and Performance of Emergency Services.....	3-307
Cost of Implementation.....	3-308
3.14.3. Environmental Justice Analysis and Civil Rights Impact Analysis.....	
Environmental Justice.....	3-310
Civil Rights Impacts Analysis (CRIA).....	3-311
3.14.4. Incomplete and Unavailable Information.....	3-311
3.15. Other Required Disclosures.....	3-313
3.15.1. Adverse Environmental Effects that Cannot be Avoided.....	3-313
3.15.2. Short-term Uses and Maintenance of Long-term Productivity.....	3-317

3.15.3. Irreversible and Irretrievable Commitments of Resources	3-317
3.15.4. Cumulative Effects	3-318
3.15.5. Conflicts with Plans or Policies of Other Jurisdictions	3-318
3.15.6. Effects on Consumers, Civil Rights, Minority Groups, Women and Environmental Justice	3-318
3.15.7. Effects on American Indian Rights	3-318
3.15.8. Prime Farmlands, Rangelands, Forestlands, or Parklands	3-319
3.15.9. Wetlands and Floodplains	3-319
3.16. Forest Plan Amendment	3-319
CHAPTER 4: Consultation and Coordination	4-1
4.1. Consultation with U.S. Fish and Wildlife Service (FWS)	4-1
4.2. Consultation with National Marine Fisheries Service (NOAA Fisheries)	4-1
4.3. Consultation with Oregon State Historic Preservation Office	4-1
4.4. Consultation with Tribal Governments	4-2
4.5. Consultation with Federal, State and County Governments	4-2
CHAPTER 5: List of Preparers	5-1
CHAPTER 6: Distribution List of Draft EIS	6-1
REFERENCES	Reference-1
GLOSSARY	Glossary-1
INDEX	Index-1

Appendices

Appendix A	Maps for all Alternatives
	<ul style="list-style-type: none"> • Alternative 1 OHV Use in the Mt. Hood National Forest • Alternative 1 OHV Use on the Barlow Ranger District • Alternative 1 OHV Use on the Clackamas River Ranger District • Alternative 1 OHV Use on the Hood River Ranger District • Alternative 1 OHV Use on the Zigzag Ranger District • Alternative 2 OHV Proposal Overview • Alternative 2 OHV Proposal Bear Creek • Alternative 2 OHV Proposal Gibson Prairie • Alternative 2 OHV Proposal LaDee Flats • Alternative 2 OHV Proposal McCubbins Gulch • Alternative 2 OHV Proposal Peavine • Alternative 2 OHV Proposal Rock Creek • Alternative 3 OHV Proposal Overview • Alternative 3 OHV Proposal Bear Creek • Alternative 3 OHV Proposal Gibson Prairie • Alternative 3 OHV Proposal Graham Pass • Alternative 3 OHV Proposal LaDee Flats • Alternative 3 OHV Proposal McCubbins Gulch

	<ul style="list-style-type: none"> • Alternative 3 OHV Proposal Mount Defiance • Alternative 3 OHV Proposal Peavine • Alternative 3 OHV Proposal Rock Creek • Alternative 4 OHV Proposal Overview • Alternative 4 OHV Proposal LaDee Flats • Alternative 4 OHV Proposal McCubbins Gulch • Alternative 4 OHV Proposal Rock Creek
Appendix B	Mt. Hood National Forest Land and Resource Management Plan (1990)
	Appendix C – Access and Travel Management Guide Summary
Appendix C	Oregon State Regulations
Appendix D	Applicable Forest Plan and Northwest Forest Plan Standards and Guidelines
Appendix E	Alternative 2 Road Data
Appendix F	Alternative 3 Road Data
Appendix G	Alternative 4 Road Data
Appendix H	Natural Range of Variability

List of Tables

Table 1-1. Allowable OHV use under the Proposed Action.....	1-
Table 1-2. Comparison of combinations of State OHV Classes identified in the Proposed Action and alternatives to the Proposed Action with Motor Vehicle Use Map (MVUM) motor vehicle categories required by the Forest Service Manual (FSM 7711.3.5).....	1-
Table 1-3. Complete list of Forest Orders (as of November 8, 2008) for the Mt. Hood National Forest.....	1-
Table 1-4. Forest Plan Standards and Guidelines discussing off-road vehicle (ORV) travel included in the proposed Forest Plan Amendment for all Alternatives.....	1-
Table 1-5. Forest Plan Standards and Guidelines discussing off-road vehicle (ORV) travel included in proposed Forest Plan Amendment for Alternatives 2 and 3.....	1-
Table 2-1. Summary of where and what type of OHV use is currently limited or prohibited based on Forest Plan direction.....	2-
Table 2-2. Summary of where and what type of OHV use is currently limited or prohibited based on current Forest Orders.....	2-
Table 2-3. Summary of existing motorized trails.....	2-
Table 2-4. Forest Plan Land Use Allocations for Alternative 1 for areas, roads and trails.....	2-
Table 2-5. Forest Plan Land Use Allocations for motorized trails in Alternative 1.....	2-
Table 2-6. Miles of OHV Routes Proposed by Class for Each System in Alternative 2.....	2-
Table 2-7. Miles of roads to be decommissioned in Alternative 2.....	2-

Table 2-8. Miles of new trail construction, including estimated mileage of user-created trails, for Alternative 2.....	2-
Table 2-9. Proposed Staging Areas for Alternative 2.....	2-
Table 2-10. Forest Plan Land Use Allocations for Alternative 2.....	2-
Table 2-11. Northwest Forest Plan Land Use Allocations for Alternative 2.....	2-
Table 2-12. Proposed OHV routes within Riparian Reserves for Alternative 2.....	2-
Table 2-13. Proposed Standards and Guidelines for Forest Plan Amendment #1 for All Action Alternatives.....	2-
Table 2-14. Additional Proposed Standards and Guidelines for Forest Plan Amendment #17 for Alternative 2 – Proposed Action.....	2-
Table 2-15. Miles of OHV routes by class for each system in Alternative 3.....	2-
Table 2-16. Miles of roads to be decommissioned in Alternative 3.....	2-
Table 2-17. Miles of new trail construction, including estimated mileage of user-created trails, for Alternative 3.....	2-
Table 2-18. Proposed Staging Areas for Alternative 3.....	2-
Table 2-19. Forest Plan Land Use Allocations for Alternative 3.....	2-
Table 2-20. Northwest Forest Plan Land Use Allocations for Alternative 3.....	2-
Table 2-21. Proposed OHV routes within Riparian Reserves for Alternative 3.....	2-
Table 2-22. Additional Proposed Standards and Guidelines for Forest Plan Amendment #17 for Alternative 3.....	2-
Table 2-23. Miles of OHV routes proposed by class for each system in Alternative 4.....	2-
Table 2-24. Miles of roads to be decommissioned in Alternative 4.....	2-
Table 2-25. Miles of new trail construction, including estimated mileage of user-created trails, for Alternative 3.....	2-
Table 2-26. Proposed staging areas for Alternative 4.....	2-
Table 2-27. Forest Plan Land Use Allocations for Alternative 4.....	2-
Table 2-28. Northwest Forest Plan Land Use Allocations for Alternative 4.....	2-
Table 2-29. Proposed OHV routes within Riparian Reserves for Alternative 4.....	2-
Table 2-30. Comparison of alternatives by area, roads, and trails where OHV use is permitted.....	2-
Table 2-31. Comparison of proposed routes for action alternatives.....	2-
Table 2-32. Comparison of proposed roads and trails for action alternatives.....	2-
Table 2-33. Comparison of staging areas for action alternatives.....	2-
Table 2-34. Comparison of major components of action alternatives.....	2-

Table 2-35. Comparison of environmental effects of implementing the alternatives in relation to purpose and need/desired future conditions, and key and tracking issues.....	2-
Table 3-1. Descriptions of semi-primitive motorized, roaded natural and roaded modified recreation opportunity spectrum (ROS) settings.....	3-
Table 3-2. Selected OHV recreation sites and areas in Oregon.....	3-
Table 3-3. Frequency of motorized trail participation in Oregon among households reporting OHV participation.....	3-
Table 3-4. Mt. Hood National Forest activity participation and primary activity (NVUM) and national user participation (NSRE) in comparable recreation activities.....	3-
Table 3-5. Secondary activities reported by primary OHV users in the Pacific Northwest Region of the Forest Service.....	3-
Table 3-6. Trends in number of people participating and number of participation days for selected outdoor recreation activities in the United States, 1999-2008.....	3-
Table 3-7. Miles of proposed routes by proposed and ROS setting in Alternative 2.....	3-
Table 3-8. Miles of proposed routes by proposed system and ROS setting in Alternative 3.....	3-
Table 3-9. Miles of proposed routes by proposed system and ROS setting in Alternative 4.....	3-
Table 3-10. Qualitative description of the adequacy of an OHV experience based solely on the number of connected miles in a route system for each vehicle class.....	3-
Table 3-11. Motorized trails in Alternative 1.....	3-
Table 3-12. Miles of connected OHV routes by vehicle class and proposed system for Alternative 2.....	3-
Table 3-13. Miles of connected OHV routes by vehicle class and proposed system for Alternative 3.....	3-
Table 3-14. Miles of connected OHV routes by vehicle class and proposed system for Alternative 4.....	3-
Table 3-15. Number of miles of connected routes (by proposed system) in Alternative 1 for several combinations of vehicle classes.....	3-
Table 3-16. Number of miles of connected routes (by proposed system) proposed in Alternative 2 for several combinations of vehicle classes.....	3-
Table 3-17. Number of miles of connected routes (by proposed system) proposed in Alternative 3 for several combinations of vehicle classes.....	3-
Table 3-18. Number of miles of connected routes (by proposed system) proposed in Alternative 4 for several combinations of vehicle classes.....	3-
Table 3-19. Approximate OHV route miles in Hood River County (Eastside Area and Northwest Area) combined with proposed National Forest system routes in the Gibson Prairie and Mt. Defiance locations for several combinations of vehicle classes in Alternative 3.....	3-

Table 3-20. Number of dead-end routes and miles of dead-end routes, both short term and long term, by proposed system in Alternative 2	3-
Table 3-21. Number of dead-end routes and miles of dead-end routes, both short term and long term, by proposed system in Alternative 3	3-
Table 3-22. Number of dead-end routes and miles of dead-end routes, both short term and long term, by proposed system in Alternative 4	3-
Table 3-23. Route miles (native surface, single-lane gravel roads and trails) and percentage of total proposed connected routes forest-wide for three difficulty levels in Alternative 1	3-
Table 3-24. Route miles and percentage of total proposed connected routes by proposed system for three difficulty levels in Alternative 2	3-
Table 3-25. Route miles and percentage of total proposed connected routes by proposed system for three difficulty levels in Alternative 3	3-
Table 3-26. Route miles and percentage of total proposed connected routes by proposed system for three difficulty levels in Alternative 4	3-
Table 3-27. Route miles and percentage of total proposed connected routes in Hood River County including proposed connections to National Forest system routes in the Gibson Prairie and Mt. Defiance locations for three difficulty levels in Alternative 3	3-
Table 3-28. Estimated available OHV visitor days (by proposed system) for Alternative 2 based on available season, staging area parking capacity (number of vehicles towing a trailer), and persons-at-one-time (PAOTs)	3-
Table 3-29. Estimated available OHV visitor days (by proposed system) for Alternative 3 based on available season, staging area parking capacity (number of vehicles towing a trailer), and persons-at-one-time (PAOTs)	3-
Table 3-30. Estimated available OHV visitor days (by proposed system) for Alternative 4 based on available season, staging area parking capacity (number of vehicles towing a trailer), and persons-at-one-time (PAOTs)	3-
Table 3-31. Sound pressure (dB) estimates, noise effect and amount of area potentially affected (non-motorized trails, developed recreation sites and wilderness areas) by OHVs on proposed routes by proposed system for Alternative 2	3-
Table 3-32. Sound pressure (dB) estimates, noise effect and amount of area potentially affected (non-motorized trails, developed recreation sites and wilderness areas) by OHVs on proposed routes by proposed system for Alternative 3	3-
Table 3-33. Sound pressure (dB) estimates, noise effect and amount of area potentially affected (non-motorized trails, developed recreation sites and wilderness areas) by OHVs on proposed routes by proposed system for Alternative 4	3-
Table 3-34. Proposed OHV system and alternative comparison for soils	3-
Table 3-35. Proposed OHV systems within drinking water source areas by alternative	3-
Table 3-36. Streams on the Forest that are in or adjacent to proposed OHV systems and do not meet Federally-approved state water quality standards	3-

Table 3-37. ACS indicators and where they are discussed in this EIS	3-
Table 3-38. Proposed OHV route systems located in Key Watersheds	3-
Table 3-39. Total OHV route miles by 5th field watershed for Alternative 1	3-
Table 3-40. Total OHV route miles within 100 feet of streams by 5th field watershed for Alternative 1	3-
Table 3-41. Total OHV route stream crossings by 5th field watershed for Alternative 1	3-
Table 3-42. Miles of OHV routes that are located in drinking water source areas that have a surface water source	3-
Table 3-43. Miles of OHV routes that are located in drinking water source areas that have a groundwater source	3-
Table 3-44. Total OHV route miles within Riparian Reserves by 5th field watershed for Alternative 1	3-
Table 3-45. Summary of water quality indicators for Alternative 1	3-
Table 3-46. Cumulative effects summary for Alternative 1	3-
Table 3-47. WEPP model run showing the potential decrease in soil erosion from a road that has been converted to an OHV trail	3-
Table 3-48. Miles of OHV routes within 100 feet of streams by 5th field watershed for Alternative 1 and 2	3-
Table 3-49. Number of OHV route stream crossing by 5th field watershed for Alternatives 1 and 2	3-
Table 3-50. WEPP model run showing the difference in erosion and sedimentation between a gravel surface road and a native surface road	3-
Table 3-51. Miles of OHV routes within drinking water source areas for Alternatives 1 and 2	3-
Table 3-52. Miles of OHV routes within Riparian Reserves for Alternatives 1 and 2	3-
Table 3-53. Staging area information for Alternative 2	3-
Table 3-54. Summary of water quality indicators for Alternative 2	3-
Table 3-55. Summary of aquatic restoration activities for Alternative 2	3-
Table 3-56. Miles of OHV routes within 100 feet of streams by 5th field watershed for Alternatives 1 and 3	3-
Table 3-57. Number of OHV route stream crossing by 5th field watershed for Alternatives 1 and 3	3-
Table 3-58. Staging area information for Alternative 3	3-
Table 3-59. Miles of OHV routes within in drinking water source areas for Alternatives 1 and 3	3-
Table 3-60. Miles of OHV routes within Riparian Reserves for Alternatives 1 and 3	3-

Table 3-61. Summary of water quality indicators for Alternative 3.....	3-
Table 3-62. Summary of aquatic restoration activities for Alternative 3.....	3-
Table 3-63. Miles of OHV routes within 100 feet of streams by 5th field watershed for Alternatives 1 and 4.....	3-
Table 3-64. Number of OHV route stream crossing by 5th field watershed for Alternative 1 and 4.....	3-
Table 3-65. Staging area information for Alternative 4.....	3-
Table 3-66. Miles of OHV routes within in drinking water source area for Alternatives 1 and 4.....	3-
Table 3-67. Miles of OHV routes within Riparian Reserves for Alternatives 1 and 4.....	3-
Table 3-68. Summary of water quality indicators for Alternative 4.....	3-
Table 3-69. Summary of aquatic restoration activities for Alternative 4.....	3-
Table 3-70. Summary of cumulative effects for Alternatives 2, 3, and 4.....	3-
Table 3-71. ESA listed, special status and other important aquatic species found in Forest fifth field watersheds.....	3-
Table 3-72. Presence of ESA listed fish, Regional Forester’s Special Status Species, designated critical habitat, and essential fish habitat within the eight proposed OHV route systems on the Mt. Hood National Forest.....	3-
Table 3-73. Spawning habitat fine sediment levels in surveyed streams within or downstream of proposed OHV systems in the Mt. Hood National Forest.....	3-
Table 3-74. Miles of OHV road/trail routes within 100 feet of streams, grouped by intermittent (I) and perennial (P) flow regime, within the Mt. Hood National Forest for all alternatives addressed in this EIS.....	3-
Table 3-75. Miles of OHV road/trail routes within 100 of streams, grouped by fish and non-fish bearing designation, within the Mt. Hood National Forest for all alternatives addressed in this EIS.....	3-
Table 3-76. OHV road/trail stream crossings, grouped by intermittent (I) and perennial (P) flow regime, within the Mt. Hood National Forest for all alternatives addressed in this EIS.....	3-
Table 3-77. OHV road/trail stream crossings, grouped by fish and non-fish bearing designation, within the Mt. Hood National Forest for all alternatives addressed in this EIS.....	3-
Table 3-78. Estimated amounts of soil delivered to a stream from a ford in the McCubbins Gulch area based on varying trail approach gradients.....	3-
Table 3-79. Summary of cumulative effects to aquatic fauna and habitat for all alternatives.....	3-
Table 3-80. Roads within 100 feet of water bodies proposed for decommissioning for all action alternatives.....	3-
Table 3-81. The number of stream crossings on roads proposed for decommissioning for all action alternatives.....	3-

Table 3-82. OHV route lengths (in miles) within 100 feet of surface water for each of the proposed OHV systems in Alternative 2	3-
Table 3-83. Total number of intermittent stream crossings associated with routes proposed in Alternative 2 for each OHV system	3-
Table 3-84. Total number of perennial stream crossings associated with routes proposed in Alternative 2 for each OHV system	3-
Table 3-85. OHV route lengths (in miles) within 100 feet of surface water for each of the proposed OHV systems in Alternative 3	3-
Table 3-86. Total number of intermittent stream crossings associated with routes proposed in Alternative 3 for each OHV system	3-
Table 3-87. Total number of perennial stream crossings associated with routes proposed in Alternative 3 for each OHV system	3-
Table 3-88. Route lengths (in miles) within 100 feet of surface water for proposed OHV systems in Alternative 4	3-
Table 3-89. Total number of intermittent stream crossings associated with routes proposed in Alternative 4 for each OHV system	3-
Table 3-90. Total number of perennial stream crossings associated with routes proposed in Alternative 4 for each OHV system	3-
Table 3-91. Effects determination summary of all alternatives for ESA listed fish and designated critical habitat, Regional Forester's Special Status Species, and Essential Fish Habitat	3-
Table 3-92. Comparison of user created trails vs. new trail construction	3-
Table 3-93. Number of known owls sites within the disturbance and disruption distances for each action alternative	3-
Table 3-94. Summary of effects to sensitive, rare and uncommon species	3-
Table 3-95. Summary of the effects of the alternatives to wildlife and LSR habitat	3-
Table 3-96. OHV routes that would occur in summer and winter range by alternative	3-
Table 3-97. Road densities by alternative and proposed OHV system	3-
Table 3-98. Past, present and foreseeable future projects and actions	3-
Table 3-99. ACS indicators and alternative effects	3-
Table 3-100. ACS objectives and indicators that comprise each objective	3-
Table 3-101. Summary of heritage resources for the LaDee Flats OHV system	3-
Table 3-102. Summary of heritages resources for the Peavine OHV system	3-
Table 3-103. Summary of heritage resources for the Graham Pass OHV system	3-
Table 3-104. Summary of heritage resources for the McCubbins Gulch OHV system	3-
Table 3-105. Summary of heritage resources for the Rock Creek OHV system	3-
Table 3-106. Summary of heritage resources for the Gibson Prairie OHV system	3-

Table 3-107. Summary of heritage resources for the Bear Creek OHV system.....	3-
Table 3-108. Fire behavior for each representative weather station and OHV system.....	3-
Table 3-109. Fire size class and corresponding acres.....	3-
Table 3-110. Ignition and statistical causes on the Mt. Hood NF from 1980 to 2007.....	3-
Table 3-111. Total of Forestwide lightning and human caused fires from 1980 to 2007.....	3-
Table 3-112. Total of ignition causes and acres for each OHV system from 1980 to 2007.....	3-
Table 3-113. Suppression costs based on fire behavior and size of IA fires (through the first four hours).....	3-
Table 3-114. Miles of mixed-use by proposed OHV system for Alternative 2.....	3-
Table 3-115. Miles of mixed-use by proposed OHV system for Alternative 3.....	3-
Table 3-116. Miles of mixed-use by proposed OHV system for Alternative 4.....	3-
Table 3-117. Miles of road to be converted to OHV trail by alternative.....	3-
Table 3-118. Annual costs to maintain ML 1 roads by alternative (cost per mile is \$1884.22).....	3-
Table 3-119. Annual costs to maintain ML 2 roads by alternative (cost per mile is \$1098.68).....	3-
Table 3-120. Combined total costs to maintain ML 1 & 2 roads by alternative.....	3-
Table 3-121. Total miles of mixed-use proposed by alternative.....	3-
Table 3-121. State and Federal air quality standards.....	3-
Table 3-122. Potential air quality cumulative effects for Alternative 1.....	3-
Table 3-123. Potential air quality cumulative effects for Alternatives 2, 3, and 4.....	3-
Table 3-124. Land area and miles of trail in the nine wilderness areas that are entirely or partially in the Mt. Hood National Forest.....	3-
Table 3-125. Miles of proposed OHV route by alternative and proposed system that coincide with the boundary of a congressionally designated area or inventoried roadless area in the Mt. Hood National Forest.....	3-
Table 3-126. Age distribution for the study area in 1990 and 2000.....	3-
Table 3-127. Percent of population and number of people age 16 and older participating in off- highway vehicle recreation, by demographic category, 1999-2007, Pacific Region.....	3-
Table 3-128. Percent of population and number of people age 16 and older participating in off-highway vehicle recreation, by demographic category, 1999-2007, Oregon.....	3-
Table 3-129. Economic contribution of Mt. Hood National Forest recreation use.....	3-
Table 3-130. Motorized use broken into OHV and other motorized categories.....	3-
Table 3-131. OHV expenditures for in-State and out-of-state visitor contributions.....	3-
Table 3-132. Total OHV trip expenditures by type of purchase.....	3-

Table 3-133. Total annual expenditures: by region in Oregon	3-
Table 3-134. Annual expenditures: income and jobs by region in Oregon.....	3-
Table 3-135. Final CMTL and CMRD budget.....	3-
Table 3-136. Costs of building and maintaining roads and trails for Alternative 1.....	3-
Table 3-137. Costs of building and maintaining roads and trails for Alternative 2.....	3-
Table 3-138. Costs of building and maintaining roads and trails for Alternative 3.....	3-
Table 3-139. Costs of building and maintaining roads and trails for Alternative 4.....	3-
Table 3-140. Adverse effects that cannot be avoided for proposed OHV systems for Alternatives 2, 3 and 4.....	3-

List of Figures

Figure 2-1. Vicinity Map for Alternative 2-Proposed Action.....	2-
Figure 2-2. Vicinity Map for Alternative 3.....	2-
Figure 2-3. Vicinity Map for Alternative 4.....	2-
Figure 3-1. OHV routes within 100-feet of streams by alternative.....	3-
Figure 3-2. Stream crossing for each alternative.....	3-
Figure 3-3. Native surface stream crossings by soil erosion potential.....	3-
Figure 3-4. Native surface crossings by OHV system for Alternative 2.....	3-
Figure 3-5. OHV routes in drinking water source areas by action alternative.....	3-
Figure 3-6. OHV routes in Riparian Reserves for the action alternatives.....	3-
Figure 3-7. Map of bull trout distribution.....	3-
Figure 3-8. Map of Lower and Middle Columbia River steelhead trout distribution.....	3-
Figure 3-9. Map of Lower Columbia River and Upper Willamette River Chinook salmon distribution.....	3-
Figure 3-10. Map of Lower Colombia River Coho salmon fish distribution.....	3-
Figure 3-11. Map of rainbow and cutthroat trout fish distribution.....	3-
Figure 3-12. Map of Clackamas, Hood River, Jefferson, Marion, Multnomah and Wasco counties.....	3-
Figure 3-13. Population in the study area.....	3-